CEC Standby Power Workshop

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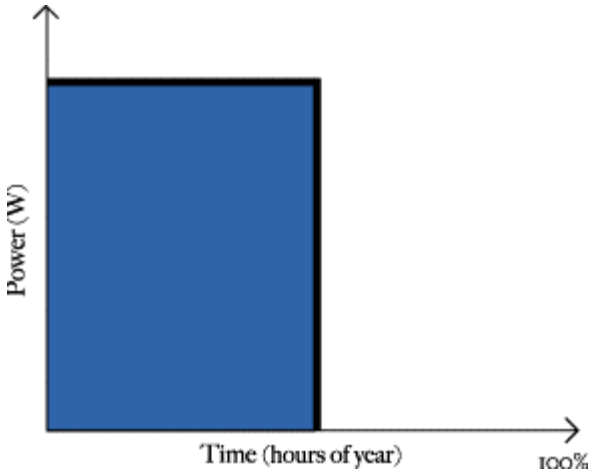
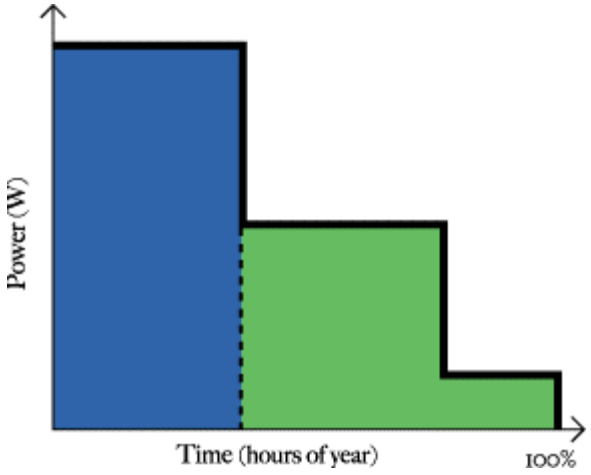
Clark Kerr Conference Center
Berkeley, CA

What Is This Workshop About?

Until recently, most appliances and electronic devices were either ON or OFF. The figure to the right shows the operating pattern of a traditional product that can be either ON or OFF. Note that all of its energy use occurs while it is ON but that condition occurs for only part of the time. Think of products like toasters, older washing machines, and electric typewriters.



Now, many products have low power modes consuming power somewhere between zero and full power. These modes have names like standby, sleep, hibernate, power-save, etc. An operating pattern for a typical product with low power modes is shown by the green area in the figure to the right. We call these not-on, not-off states, "low power modes" (leaving the "high power mode" for times when the product is ON).



We are surrounded by products with low-power modes: TVs, VCRs, computers, dishwashers, dustbusters, cordless phones, stereos, copiers, and microwave ovens. Note that now some of the product's energy use occurs while the device is OFF. Indeed, about 3/4 of a VCR's electricity consumption occurs while it is not ON. An average home has over twenty products operating for most of the time in these low power modes and large offices can have thousands.

The rapid appearance - and proliferation - of products with low power modes offers a host of new services and features, especially to communicate and to manage the operation of the device. At the same time, these low power modes are transforming energy consumption patterns. It appears that the energy use of products while in their low power modes is one of the fastest growing aspects of residential and commercial electricity use.

The purpose of this Workshop is to advise the California Energy Commission on strategies to:

- Understand the scope of energy use by products in low power modes
- Identify technical potential for reducing energy use in these modes
- Support research to eliminate technical barriers to improving energy efficiency in the low power modes
- Establish programs to encourage energy efficient low power operation